

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Evan Pert Examiner #: 77099 Date: 2-14-00  
 Art Unit: 2813 Phone Number 306 5689 Serial Number: 09 434 736  
 Mail Box and Bldg/Room Location: CP4 4B36 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method for Filling Contact Holes with Metal  
by 2-Step Deposition

Inventors (please provide full names): \_\_\_\_\_

Sang Young Kim, Yung Wook Song, Hun Do Kim

Earliest Priority Filing Date: 10-21-91

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Legal Search

Priority to Korean 91-18500 10-21-91

07/964,362 10/21/92 abandoned

Patent No. 5,683,938

SEARCH FOR LITIGATION

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02-14-00A09:03 FILE

## STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Tamie Tabe</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: <u>302-6559</u>	AA Sequence (#) _____	<u>Dialog</u>
Searcher Location: <u>CP4 9C 15</u>	Structure (#) _____	<u>Questel/Orbit</u>
Date Searcher Picked Up: <u>2/14</u>	Bibliographic _____	Dr. Link _____
Date Completed: <u>2/14</u>	Litigation <u>X</u>	<u>Lexis/Nexis</u>
Searcher Prep & Review Time: <u>5</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>3</u>	Other _____	Other (specify) _____

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CRXX (CLAIMS Current Legal Status)  
Legal Status actions current thru December 07,1999 (2000-01/UP)  
Reassignment data current as of December 06,1999.  
For info on technical content on this file, enter: INFO CRXX

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Cluster : LEGAL  
Databases : LGST, CRXX, PAST, LITA

Search statement 1

?us5683938/pn

Term not in index/PN-LITA : US5683938

LGST	1
CRXX	1
PAST	1
LITA	0

\*\* SS 1 : Results 3

Search statement 2

?prt full 1-3

1/3 LGST (1/1) - (C) LEGSTAT  
PN - US 5683938 [US5683938]  
AP - US 327887/94 19941024 [1994US-0327887]  
DT - US-P  
ACT - 19941024 US/AE-A  
APPLICATION DATA (PATENT)  
{US 327887/94 19941024 [1994US-0327887]}  
- 19971104 US/A  
PATENT  
- 19991221 US/RF  
REISSUE APPLICATION FILED  
19991102  
UP - 1999-51

2/3 CRXX (1/1) - (C) CLAIMS/RRX  
AN - 2902677  
PN - 5,683,938 A 19971104 [US5683938]  
PT - C (Chemical)  
PA - Hyundai Electronics Industries Co Ltd KR  
ACT - 19991102 REISSUE REQUESTED  
Issue Date of O.G.: 19991221  
Reissue Request Number: 09/434736  
Examination Group responsible for Reissue process: 2812

UP - 1999-50  
UACT- 1999-12-21

3/3 PAST (1/1) - (C) PAST  
AN - 199951-001283  
PN - 5683938 A [US5683938]  
DT - A (UTILITY)  
OG - 1999-12-21  
CO - REA  
ACT - REISSUE APPLICATION FILED  
SH - REISSUE APPLICATION FILED

Search statement 2

Please ENTER the NAME of the file you want to search. To see a description of a file, type its page number and press the ENTER key.

FILES - PAGE 1 of 7 (NEXT PAGE for additional files)

NAME	PG	DESCRIP	NAME	PG	DESCRIP
---CASES & ADMINISTRATIVE DECISIONS---			-----PATENTS GROUP FILES-----		
IPOMNI	1	Int Prop Cases & Reg Matl	ALL	4	UTIL, DESIGN, PLANT, SIR,
PTOMNI	1	FEDCTS, PTO, ITC, ALLREG			REEXAM & REISS
CASES	1	FEDCTS, PTO & ITC	ALLPAT	4	Comb. ALL & INTPAT
FEDCTS	2	Patent cases from Fed. Cts.	-----U.S. PATENTS-----		
CCPA	2	Ct Customs & Patent Appeals	UTIL	4	Full Text Patents from 1971*
CAFC	2	Patent cases from Fed. Cir.	DESIGN	4	Full Text Patents from 1976
PTO	2	PATAPP & COMMR	PLANT	4	Full Text Patents from 1976
-----SECONDARY SOURCES-----					
IPLTR	5	Intell Prop Law Nwltrs			
IPLR	5	Intell Prop Law Rev Articles			

\* Selected coverage 1/15/71 to 12/3/74

LEVEL - 1 OF 1 PATENT

5,683,938

<=2> GET 1st DRAWING SHEET OF 3

Nov. 4, 1997

Method for filling contact holes with metal by two-step  
deposition

REISSUE: Reissue Application filed Nov. 2, 1999 (O.G. Dec. 21, 1999) Ex. Gp.:  
2812; Re. S.N. 09/434,736

CORE TERMS: layer, hole, insulating, tungsten, selective, film, oxide, thin,  
filling, gate...

Please ENTER the NAME of the file you want to search. To see a description of a file, type its page number and press the ENTER key.

FILES - PAGE 1 of 7 (NEXT PAGE for additional files)

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---CASES & ADMINISTRATIVE DECISIONS---

IPOMNI 1 Int Prop Cases & Reg Matl  
PTOMNI 1 FEDCTS, PTO, ITC, ALLREG  
CASES 1 FEDCTS, PTO & ITC  
FEDCTS 2 Patent cases from Fed. Cts.  
CCPA 2 Ct Customs & Patent Appeals  
CAFC 2 Patent cases from Fed. Cir.  
PTO 2 PATAPP & COMMR

-----PATENTS GROUP FILES-----

ALL 4 UTIL, DESIGN, PLANT, SIR,  
REEXAM & REISS  
ALLPAT 4 Comb. ALL & INTPAT  
-----U.S. PATENTS-----  
UTIL 4 Full Text Patents from 1971\*  
DESIGN 4 Full Text Patents from 1976  
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IPLTR 5 Intell Prop Law Nwltrs  
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\* Selected coverage 1/15/71 to 12/3/74

5,683,938 OR 5683938

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PUBS 7 Group file of these Journals:  
COMM 8 Communications Journals  
CMPTRS 9 Computers Journals  
ELTRNC 10 Electronics Journals  
TECHNY 11 Technology Journals  
TRANS 12 Transportation Journals  
ENERGY 13 Energy Journals

-----INTERNATIONAL MATERIALS-----

CUSINF 5 Customs Administ. Rulings  
ITC 5 International Trade Comm  
Rulings Series 337 & 731  
TREATY 5 Intell Property treaties  
CPR 5 Can. Patent Rprt.

GUIDE 14 LEXIS(R) Product Guide

-----PATENT LAW PERIODICALS-----

AIPLA 6 AIPLA Quarterly Journal  
PTCLAW 6 Sec. of Intel. Prop. Law  
HRVTEC 6 Harvard University Journal  
of Law & Technology  
LAWTEC 6 Journal of Law & Technology  
JNLS 6 Combined AIPLA, PTCLAW  
HRVTEC & LAWTEC  
MHINTP 6 Martindale IP Listings  
IPMAG 6 Intellect Prop  
IPTDAY 6 Intellectual Property Today  
IPWW 7 IP Worldwide  
PATENT 6 Mar-Hub Pat. & TM Listings

5,683,938 OR 5683938

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-- Full-Text Group Files --			--- Full-Text By Type ---			- Full Text By Region -		
TODAY	2	Today's News	MAGS	4	Magazines	-- Papers & Wires --		
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CURNWS	2	Last 2 years	NWLTRS	4	Newsletters	US	2	US News
ARCNWS	2	Beyond 2 years	PAPERS	4	Newspapers	-- US Sources --		
ALLNWS	2	All News Files	SCRIPT	4	Transcripts	MWEST	4	Midwest
			WEBPUB	4	Web Pubs	NEAST	4	Northeast
-- Group File Exclusions --			WIRES	4	Wires	SEAST	4	Southeast
ALLABS	5	All Abstracts	----- Hot Files -----			WEST	4	West
NONENG	2	Non-English News	HOTTOP	3	Hot Topics *	----- Assists -----		
			Y2KNWS	3	Year 2000 Nws*	GUIDE	3	Descriptions*
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5683938

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File 345:Inpadoc/Fam.& Legal Stat 1968-2000/UD=200004  
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Set	Items	Description
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?s pn=us	5683938	
S1	1	PN=US 5683938
?t	1/39/1	

1/39/1  
DIALOG(R)File 345:Inpadoc/Fam.& Legal Stat  
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12902227  
Basic Patent (No,Kind,Date): KR 9512918 B1 19951023 <No. of Patents: 002>  
Patent Family:

Patent No	Kind	Date	Applic No	Kind	Date	
KR 9512918	B1	19951023	KR 9118500	A	19911021	(BASIC)
US 5683938	A	19971104	US 327887	A.	19941024	

Priority Data (No,Kind,Date):

KR 9118500 A 19911021  
US 327887 A 19941024  
US 964362 B1 19921021

PATENT FAMILY:

KOREA, REPUBLIC (KR)

Patent (No,Kind,Date): KR 9512918 B1 19951023  
CONTACT FILLING METHOD USING SECONDARY DEPOSITION OF SELECTIVE TUNGSTEN  
THIN FILM (English)

Patent Assignee: HYUNDAI ELECTRONICS IND (KR)

Author (Inventor): KIM SANG-YONG (KR); SONG YONG-UK (KR); KIM  
HYON-DO (KR)

Priority (No,Kind,Date): KR 9118500 A 19911021

Applic (No,Kind,Date): KR 9118500 A 19911021

IPC: \* H01L-021/768; H01L-023/522

Language of Document: Korean

UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 5683938 A 19971104  
METHOD FOR FILLING CONTACT HOLES WITH METAL BY TWO-STEP DEPOSITION  
(English)

Patent Assignee: HYUNDAI ELECTRONICS IND (KR)

Author (Inventor): KIM SANG YOUNG (KR); SONG YUNG WOOK (KR); KIM HUN  
DO (KR)

Priority (No,Kind,Date): US 327887 A 19941024; KR 9118500 A  
19911021; US 964362 B1 19921021

Applic (No,Kind,Date): US 327887 A 19941024

National Class: \* 437192000; 437195000; 437981000

IPC: \* H01L-021/28

CA Abstract No: \* 127(26)364984C; 127(26)364984C

Derwent WPI Acc No: \* C 97-548996; C 97-548996

Language of Document: English

UNITED STATES OF AMERICA (US)

Legal Status (No,Type,Date,Code,Text):

US 5683938 P 19911021 US AA PRIORITY (PATENT)

KR 9118500 A 19911021

US 5683938 P 19921021 US AA PRIORITY

US 964362 B1 19921021

US 5683938 P 19941024 US AE APPLICATION DATA (PATENT)  
(APPL. DATA (PATENT))

US 327887 A 19941024

US 5683938 P 19971104 US A PATENT

US 5683938 P 19991221 US RF REISSUE APPLICATION FILED  
(REISSUE APPL. FILED)

19991102

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